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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/510,599	03/18/2005	Michel Lecomte	20513-00607-US	1793

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EXAMINER

MONDT, JOHANNES P

ART UNIT	PAPER NUMBER
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3663

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/510,599	Applicant(s) LECOMTE, MICHEL	
	Examiner Johannes P. Mondt	Art Unit 3663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 12 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-14 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. This application was filed under 35 U.S.C. 371 and the unity of invention requirement applies.

There is lack of unity under PCT Rule 13 because there is no "special technical feature" common to all Groups that defines the contribution each of the invention makes over the prior art. In the present case, there is no "special technical feature" because the general concept set forth, for instance, in claims 1 or 5 does not define over the teachings of the prior art set forth, for example, in Koutz (US 4,576,783) or Kapich (4,413,348). Restriction is required under 35 U.S.C. 121 and 372.

2. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- Group I: claims 1-4, drawn to an invention of a method for producing electricity from the heat produced in the core of at least one high temperature nuclear reactor, classified in class 376, 210+.
- Group II: claims 5-14, drawn to an invention of a device for producing electricity from the heat produced in the core of at least one high temperature nuclear reactor, classified in class 376, subclass 383+.

The inventions listed as Groups I and II do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: first heat-exchange coolant mainly of helium in a closed circuit is taught as helium gas in closed loop circuit

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14 by Koutz ((col. 2, l. 34-44) and 14 by Kapich (col. 2, l. 22-40), and in both references said first heat-exchange gas heat a second heat-exchange gas comprising helium and nitrogen in a second closed circuit 22 in Koutz (col. 2, l. 45-62) and 24 in Kapich (col. 2, l. 41-54), said second heat exchange gas driving gas driven turbine 34 in Koutz (col. 2, l. 63 – col. 3, l. 12) (gas turbine 30 in Kapich, col. 3, l. 5-14) and part of the heat passing through said gas driven turbine is recovered to produce steam through steam generator (38 in Koutz (col. 3, l. 2-30), 22 in Kapich (col. 3, l. 15-40) to produce steam for driving at least one steam turbine (46 in Koutz (col. 3, l. 2-30), and 44 in Kapich (col. 3, l. 40-52), whereas the claimed heating and vaporization is inherent to the production of steam. The tertiary circuit of claim 5 is met by the steam loop circuit of Koutz (col. 3, l. 13-16) and the steam supply circuit 42 in Kapich (col. 3, l. 41+).

With regard to the claimed composition of volume percentages helium and nitrogen have not been demonstrated in applicant's specification to be critical to the invention. Applicant is reminded in this regard that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Applicant is advised that for the reply to the election of the invention requirement to be complete said reply must include the invention to be examined even though the requirement be traversed (37 C.F.R. 1.143).

3. If either invention I or II is elected applicant is further required under 35 U.S.C.

121 to elect a single one of the following disclosed species for prosecution on the

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merits to which the claims shall be restricted if no generic claim is finally held to be allowable (currently, no claim appears to be generic):

- Species 1: single secondary circuit 9 only ([0068]; Figure 1)
- Species 2: secondary circuit 9 and 9 forming bypass circuit ([0068]; Fig. 1).

The species are patentably distinct because either the secondary circuit is only a single circuit or it is not.

4. Upon election of either Species 1 or 2 applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held allowable:

- A: rotating part of gas turbine 2 is fixed on the rotating shaft common to gas turbine 2 and steam turbines ([0040]).
- B: rotating part of gas turbine 2 and steam turbines 3 are fixed on different drive shafts (first drive shaft and second drive shafts, respectively) ([0040]).

5. Upon election of Species 1 or 2 and of Species A or B applicant is further required under 35 U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held allowable:

- Species a: secondary heat exchange gas is mixture of helium and nitrogen only ([0036]).
- Species b: secondary heat exchange gas is mixture of helium and air ([0036]).

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6. Upon election of Species 1 or 2 and of Species A or B and of Species a or b applicant is further required under 3 5U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held allowable:

- Species α : two steam turbine stages only ([0040] and [0046]).
- Species β : three steam turbines ([0040] and [0046]).

7. Upon election of Species 1 or 2 and of Species A or B and of Species a or b and of Species α or β applicant is further required under 3 5U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held allowable:

- Species (i): water supplying the steam generator is not supercritical ([0073]).
- Species (ii): water supplying the steam generator is supercritical ([0073]).

8. Upon election of Species 1 or 2 and of Species A or B and of Species a or b and of Species α or β and Species (i) or (ii) applicant is further required under 3 5U.S.C. 121 to elect one of the following disclosed species for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held allowable:

- Species H1: heat exchanger 30 is plate exchanger ([0074]).
- Species H2: heat exchanger 30 is tube exchanger ([0074]).

9. Upon election of Species 1 or 2 and of Species A or B and of Species a or b and of Species α or β and Species (i) or (ii) and Species H1 or H2 applicant is further required under 3 5U.S.C. 121 to elect one of the following disclosed species for

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prosecution on the merits to which the claims shall be restricted if no generic claim is finally held allowable:

- Species N1: installation comprises one nuclear reactor only (Figure 1).
- Species N2: installation has two nuclear reactors (Figure 2).

Applicant is required, in reply to this action, to identify the claims readable on the elected species, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered non-responsive unless accompanied by an election.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which are written in dependent form or otherwise include all the limitations of an allowed generic claim as provided by 37 CFR 1.141. If claims are added after the election, applicant must indicate which are readable upon the elected species. MPEP § 809.02(a).

The election of an invention or species may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse.

Should applicant traverse on the ground that the inventions or species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions or species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions

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unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C.103(a) of the other invention.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johannes P. Mondt whose telephone number is 571-272-1919. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JPM

March 20, 2006

Patent Examiner:



Johannes Mondt
(Art Unit: 3663)